

I Claim:

1. An integrated, tunable capacitance, comprising:

a semiconductor body having a semiconductor region of a first conductivity type embodied as a well, said semiconductor body being of a second conductivity type;

at least one first insulating region disposed in said semiconductor body, said first insulating region having a common interface with said semiconductor region and a first layer thickness;

a second insulating region having a common interface with said semiconductor region and a common interface with said first insulating region;

a control electrode disposed on said second insulating region;  
and

at least one well terminal region for connecting said semiconductor region to a control voltage for tuning the capacitance, said well terminal region having a higher dopant concentration than said semiconductor region and a second layer thickness greater than the first layer thickness.

2. The capacitance according to claim 1, further comprising a buried layer of the first conductivity type having a higher dopant concentration than said semiconductor region, and adjoining said well terminal region.

3. The capacitance according to claim 1, wherein said well terminal region is formed using bipolar fabrication technology.

4. The capacitance according to claim 1, wherein said well terminal region has a common interface with said second insulating region and said semiconductor region below said control electrode.

5. The capacitance according to claim 1, further comprising a further region for connecting to a reference-ground potential, said further region being of the second conductivity type and also highly doped as compared to said semiconductor body and has a common interface with said second insulating region and said semiconductor region below said control electrode.

6. The capacitance according to claim 1, wherein said second insulating region having a third layer thickness, being less than the first layer thickness of said first insulating region.

7. The capacitance according to claim 1, wherein said first insulating region is a shallow trench insulation region.

8. The capacitance according to claim 1, wherein said second insulating region is an oxide layer.

9. The capacitance according to claim 1, wherein said control electrode is a polycrystalline layer.